

CLAIMS

What is claimed is:

1. A symmetric clamp structure comprising:
  - a first arm having a distal end defining a first threaded bore;
  - 5 a second arm having a distal end defining a second threaded bore, wherein the first threaded bore and the second threaded bore are essentially coaxial; and
  - a screw comprising a head and a shank, the head being at one end of the shank and the shank having a threaded portion at a second end opposite the first end and a clearance portion between the threaded portion and the head, the screw being configured so that with
  - 10 a threaded engagement between the threaded portion of the shank and one of the first and second threaded bores and the head abutting one of the first and second arms opposite the threaded engagement, the clearance portion resides within the other of the first and second threaded bores.
- 15 2. The symmetric clamp structure of claim 1 wherein the clearance portion has an outer diameter sized to clear the first and second threaded bores and a length at least equal to the axial length of each threaded bore.
- 20 3. The symmetric clamp structure of claim 1 wherein a length of the clearance portion exceeds an axial length of each threaded bore.
4. The symmetric clamp structure of claim 1 wherein each of the first and second arms have a proximal end attached to a bicycle component.
- 25 5. The symmetric clamp structure of claim 4 wherein the bicycle component is a brake lever.

6. A method of attaching a clamp to a frame comprising:  
providing a frame;  
providing a symmetric clamp structure comprising a first arm having a distal end defining a first threaded bore, a second arm having a distal end defining a second threaded bore wherein the first threaded bore and the second threaded bore are essentially coaxial and have essentially the same size and pitch threading;  
providing a screw comprising a head and a shank, the head being at one end of the shank and a threaded portion being at a second end of the shank opposite the first end, the threaded portion being sized to threadably engage both the first and second threaded bores,  
10 the shank further comprising a clearance portion between the threaded portion and the head;  
engaging the screw with the clamp by screwing the threaded portion into a threaded engagement with one of the first and second bores such that the head abuts the arm opposite the threaded engagement and the clearance portion clears the threads of the  
15 threaded bore opposite the threaded engagement;  
placing the clamp over the frame so that the frame is received between the first and second arms of the clamp; and  
tightening the screw thereby driving the distal ends of the first and second arms toward each other, thereby attaching the clamp to the frame.

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7. The method of claim 6 wherein the frame is a tubular bicycle frame.  
8. The method of claim 6 wherein the frame is a tubular bicycle handlebar.  
25 9. The method of claim 6 further comprising removing the screw from threaded engagement with one of the first and second arms and engaging and tightening the screw in an opposite orientation such that the screw is threadably engaged with the other arm.

10. A method of manufacturing a symmetrical clamp structure comprising:  
providing a clamp body having a first arm having a distal end and a second arm  
having a distal end with the distal end of the first arm and the distal end of the second arm  
being substantially adjacent to each other and defining a gap between the arms;  
5 forming co-axial cylindrical threaded bores through the distal ends of the first and  
second arms;  
providing a screw having a head at one end and a threaded shank extending from  
the head to an opposite end with the threaded shank being sized to threadably engage the  
threaded bores through the distal ends of the first and second arms;  
10 forming a clearance portion on the shank between the head and the opposite end of  
the shank such that the clearance portion extends toward but not to the opposite end,  
leaving a portion of the shank opposite the head threaded;  
assembling the clamp by threadably engaging the screw with one of the first and  
second threaded bores such that the head abuts the arm opposite the threaded engagement  
15 and the clearance portion clears the threads of the threaded bore opposite the threaded  
engagement.
11. A bicycle brake lever comprising:  
a housing;  
20 a lever pivotably attached to the housing;  
a clamp attached to the housing, the clamp comprising:  
first and second arms configured to receive a bicycle handlebar axially  
therebetween, each of the first and second arms having a distal end, the distal ends having  
a space therebetween, the first arm further having a first threaded bore at its distal end and  
25 the second arm further having a second threaded bore at its distal end, the first and second  
threaded bores being essentially coaxial; and  
a screw comprising a head and a shank, the head being at one end of the shank and  
the shank having a threaded portion at a second end opposite the first end and a clearance

portion between the threaded portion and the head, the screw being configured so that with a threaded engagement between the threaded portion of the shank and one of the first and second threaded bores and the head abutting one of the first or second arms opposite the threaded engagement, the clearance portion resides within the other of the first and second  
5 threaded bores.

12. The bicycle brake lever of claim 11 wherein the clearance portion has an outer diameter sized to clear the first and second threaded bores and a length at least equal to the axial length of each threaded bore.

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13. The bicycle brake lever of claim 11 wherein a length of the clearance portion exceeds an axial length of each threaded bore.

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